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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/647,557

08/25/2003

Vernon E. Gleasman

Gleasman 08/03

3225

7590

05/25/2004

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EXAMINER

KOCZO JR, MICHAEL

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/647,557	Applicant(s) GLEASMAN ET AL.	
	Examiner Michael Kocz, Jr.	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11262003</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: ____.</p> |
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DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

On page 10, line 13, “fixed” should be deleted because rotor 28 is not fixed, but rotates.

Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

There is no basis in the specification for terms such as “drive element”, “head end”, “valve end” and “open head portion” of claims 1 and 14, for example.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 to 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the bottom paragraph is misleading and misdescriptive because the lubricating channels are not closed. These channels are annular and the annulus is never closed. It is the outer surface of the axial cylindrical body of the piston which is part of the wall which defines the lubricating channel.

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Claims 4 and 5 are merely functional and do not recite any structure to further limit a preceding claim. It is therefore not clear what limiting effect these claims are intended to have.

In claim 6, it is not clear what structure forms the "closed loop". A "loop" of hydraulic fluid is not structure.

Thorough revision of the claims is required in order to render them definite in form according to the statute.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 to 9, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. in view of Hiramatsu et al. Fujii et al. disclose the invention substantially as claimed. See figure 3 which shows a lubricating channel 30 formed in the cylindrical wall of each cylinder. All of the lubricating channels are connected via channels 29. However, Fujii et al. do not disclose variable stroke pistons. Hiramatsu et al. disclose a variable inclination swash plate which varies the stroke of the piston in order to control the output pressure of the compressor. In view of this teaching, it would have been obvious to substitute a variable inclination swash plate for the fixed inclination swash plate of Fujii et al. in order to control the output pressure of the compressor.

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. in view of Hiramatsu et al., as applied to claim 7 above, and further in view of Kim et al. Fujii et al., as previously modified, disclose the invention substantially as claimed. However, Fujii et al. do not disclose the piston/swash plate connecting structure as claimed. Kim et al. disclose a variable displacement swash plate compressor wherein each piston has a spherical head and a sliding shoe affixed to the spherical head, which sliding shoes are in sliding contact with the swash plate. An unidentified spring and a hold-down assembly 2 bias the sliding shoes toward the swash plate. This structure simplifies manufacture of the pistons and assembly of the pistons to the swash plate since it eliminates the piston recesses for holding the shoes 14. In view of this teaching, it would have been obvious to substitute structure for connecting the pistons to the swash plate, as shown by Kim et al. for that of Fujii et al.

Regarding claim 14, it would have been obvious to one of ordinary skill in the art to use a spring having a minimum bias to maintain the shoe in sliding contact with the swash plate at all times. Using too low a spring bias could result in separation of the shoe from the swash plate which would cause the shoe to impact the swash plate upon its rotation, with possible detrimental results such as structural damage.

Claims 10 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. in view of Hiramatsu et al., as applied to claim 7 above, and further in view of Anderson et al. Anderson et al. disclose a swash plate pump wherein each piston shoe is biased toward the swash plate by a spring which is positioned between the body portion of each piston and the valve end of the cylinder. This arrangement is functionally equivalent to the piston biasing structure of Fujii et al., as previously modified. In view of this teaching, it would have been obvious to

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substitute the piston biasing structure of Anderson et al. for that of Fujii et al., as previously modified.

Allowable Subject Matter

Claims 2, 3, 11, 12 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is 703-306-5648.

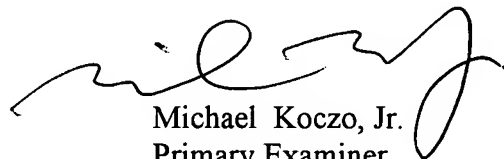
Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kocz, Jr. whose telephone number is 703-308-2630. The examiner can normally be reached on M-F; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 703-308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Michael Koczko, Jr.', is positioned above the printed name.

Michael Koczko, Jr.
Primary Examiner
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